

digital

Hardware Documentation Microfiche Libraries

PRINT SET
MP 00586
NEW PRODUCT

VT48.VT50.VT52.VT61.VT62.
VT78.VT100.VT105

TECHNICAL
INFORMATION

COMPANY CONFIDENTIAL

MF11-L/LP/U/UP.PC04/PC05.
PDP-81/8L.PDP-11/05/11/40.
PDP-11/45.PDP-11/70.PDP-12

MAINTENANCE PLAN, INFO.
SUMMARY, LOGISTICS PLAN,
USER'S GUIDE

NEW PRODUCT INTRODUCTORY
INFORMATION INDEX

WIRE LIST
PIN SORT

DLV11-J

IPB-20

LS11

PM-PROC-06

LA120

INDEX 79-06

KS10 (D)

EP-DLV11-J.PS-NP
COPYRIGHT © 1978
FICHE 1 OF 1

EP-00020-IP-F
COPYRIGHT © 1978
FICHE 1 OF 1

EP-LS11-TI-A
COPYRIGHT © 1978
FICHE 1 OF 1

EP-00006-PM-B
COPYRIGHT © 1978
FICHE 1 OF 1

EP-LA120-NP-01
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FICHE 2 OF 2

SEP 1978
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DEC 1978
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User's Guide

HARDWARE DOCUMENTATION

MICROFICHE LIBRARIES

USER'S GUIDE

digital equipment corporation • bedford, massachusetts

EK-FICHE-UG-001
1st Edition, July 1979

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HARDWARE DOCUMENTATION

MICROFICHE LIBRARIES

INTRODUCTION

This manual describes the microfiche libraries produced by Document Control and Micropublishing.* They are Minicomputer, PDP-8, PDP-11, Large Computer, VAX11/780, and KS10-based system hardware.

- MINICOMPUTER LIBRARY – Contains information on the PDP-8, -9, -11, -12, -14, and -15 computer systems.

Distribution Code: MINI – All cost centers except Field Service (700 series) are charged for each library and its updates.

* Document Control and Micropublishing is located at Bedford, Massachusetts (M/S BU-D2) and is part of the Bedford Operations Group within Educational Services Development and Publishing.

- **PDP-8 LIBRARY** – Contains PDP-8 information which is extracted from the Minicomputer Library.

Distribution Code: PDP-8 – All cost centers except Field Service (700 series) are charged for each library and its updates

- **PDP-11 LIBRARY** – Contains PDP-11 information which is extracted from the Mini-computer Library.

Distribution Code: PDP-11 – All cost centers except Field Service (700 series) are charged for each library and its updates.

- **LARGE COMPUTER LIBRARY** – Contains information on the KI and KL based systems. KA processor information is available on request.

Distribution Code: DMF – The requesting cost center is charged for each DMF designated library and its updates. A DMF library may be ordered for use at a specific customer site or as required by the cost center. When a KI or KL based system is shipped, Document Control and Micropublishing initiates the shipment of a Large Computer Microfiche Library to the cost center responsible for system maintenance. This library (Distribution Code CMF)† is intended specifically for use at the particular system site. The DMF and CMF libraries are identical in content.

- VAX 11/780 LIBRARY – Contains VAX-specific information and is intended to be used in conjunction with the Minicomputer or PDP-11 Libraries. Information on cross product line options is contained in the Minicomputer and PDP-10 libraries.

Distribution Code: VX780 – All cost centers, except Field Service (700 series), are charged for each library and its updates.

- KS10-BASED SYSTEMS LIBRARY – Contains information on the KS10 processor and its options.

Distribution Code: KSD – KS10 libraries are distributed as described above for the Large Computer Library. The Distribution Code, KSD, corresponds to the Code DMF; the Code KSC† corresponds to CMF.

† Cost centers are not charged for these libraries.

CHAPTER 1

LIBRARY OVERVIEW

1.1. LIBRARY CONTENTS

The Hardware Documentation Microfiche Libraries provide DIGITAL Field Service personnel, and other DIGITAL employees who use the libraries, with microfiche versions of the following documents:

Hardware Manuals - Maintenance, Technical, Hardware Reference and Service Manuals, Illustrated Parts Breakdown (IPB), and Preventive Maintenance (PM) Manuals.*

Diagnostic Program Descriptions and Listings.

Diagnostic Engineering Change Orders (DECO) and Diagnostic Engineering Patch Orders (DEPO). These were formerly MAINDEC Change Orders (MCO) and MAINDEC Change Notices (MCN).

Wire Lists – Name Sorts, Pin Sorts and Special Sorts. Only Name Sorts are available for the Minicomputer, PDP-8 and PDP-11 Libraries.

* User Guides (UG), Operator Manuals (OP), Maintenance Print Sets (MP), and Installation Manuals (IN) documentation are shipped with the hardware as hardcopy and are not normally included in microfiche libraries.

Tech Tips – A system for documenting technical problems, maintenance procedures and other *nice to know* information. A complete explanation of the TECH TIP program is provided on the TECH TIP Miscellaneous fiche located in the Technical Information section of the Mini-computer, PDP-8, PDP-11, Large Computer, and KS10-based systems libraries. Tech Tips are COMPANY CONFIDENTIAL.

Field Change Orders (FCO's) – FCO's order field implementation of field-effective Engineering Change Orders (ECO). The FCO documents provide complete instructions for field implementation. Whenever there is a Revised Print Package (RPP) cover sheet, which lists drawings revised by the FCO, it will be published with the FCO.

DEC-O-LOG (DOL) – The DEC-O-LOG provides synopses of ECO's, both in-plant and field-effective, for options and modules. The DEC-O-LOG page for a device or module is released/updated and published when:

- An FCO is released.
- Product Support determines that an ECO will impact field maintenance.

NOTE

DEC-O-LOG is not available for all Digital options. It is published when either of the above conditions is true.

FCO Cross Reference (FCR) – The FCR provides a chronological listing of field retrofit FCO's (synopses and quick checks) which must be considered in the field installation and maintenance of options, modules, and power supplies. The FCR is updated when an FCO is released that affects the operation or maintenance of the device. The FCR's are only produced for the microfiche libraries and are not available on hard copy.

NOTE

FCR's are not available for all Digital options since they are in the process of being replaced by the Option Summary (see below).

ECO Quick Check (ECOQC) – Provides basic information required to determine the ECO status of options. ECOQC is no longer supported. It will be replaced by the Option Summary described below.

NOTE

ECOQC's are not available for all Digital options since they are in the process of being replaced by the Option Summary (see below).

Module Circuit Schematic (CS) and Unit Assembly (UA) drawings – included in the MODULE/ASSEMBLY section of the library.

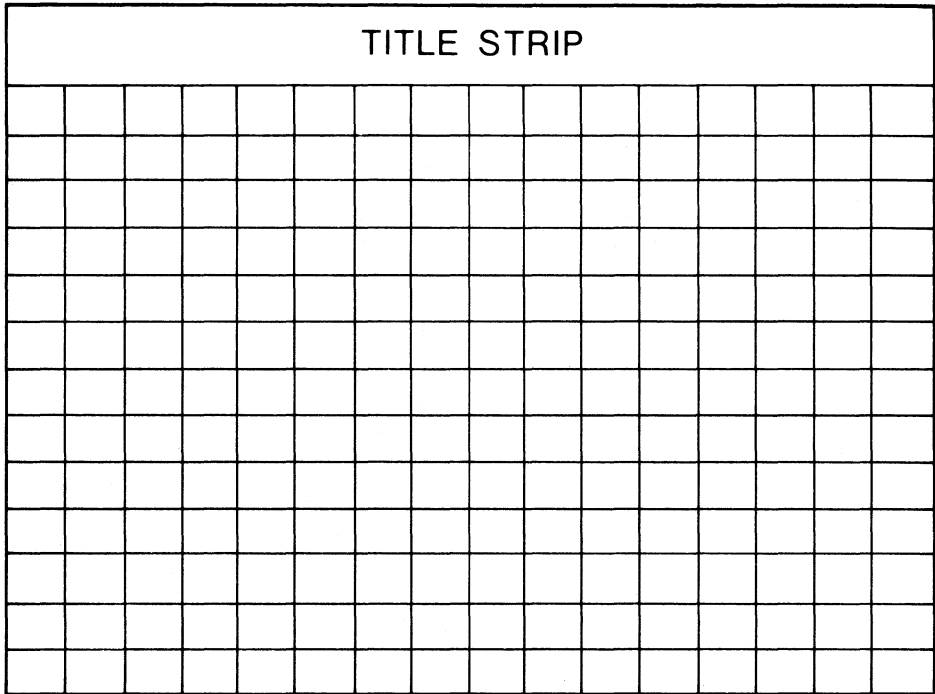
Microcode and ROM Listings – When not included in the hard copy print set, these are published in the HARDWARE MANUAL section of the library.

Option Summary – A summary of the basic field maintenance information available for a hardware option. It provides ECO/FCO/REV history, DECO/DEPO history, documentation and media lists, compatibility criteria, TECH TIP reference, etc. The Option Summary manual on OPSUM-01 fiche provides a complete explanation of the option summary data.

Miscellaneous Information – MAST (PDP-11 Modular Approach to System Testing), Handbooks, Site Prep Guide, PDP-11 Communications Manual, Diagnostic Components Catalogs, Revision Level Status, etc.

1.2 MICROFICHE FORMAT

Each fiche may contain 208 frames of information (see Figure 1-1). A frame contains the equivalent of an 11 inch x 14 inch paper document. In many cases, two trimmed 8-1/2 inch x 11 inch pages are combined on one frame. The reduction ratio is 42:1.



MA-2972

Figure 1-1 Microfiche Format (42:1 Reduction)

1.3 MICROFICHE TITLE STRIPS

Each fiche is titled for easy identification (see Figure 1-2).

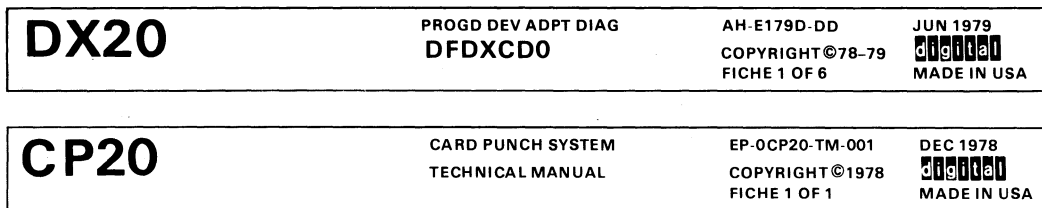


Figure 1-2 Sample Fiche Titles

The title strip contains the following:

1. At the left, device(s), module designation(s), diagnostic package identifiers, or section sequence numbers. Fiche are filed by these designations. Diagnostic listings may, at the user's option, be filed by the MAINDEC number which is located in the center of the title strip.
2. In the center, document description, types of fiche (e.g., Technical Information, Module/Assembly), diagnostic MAINDEC number, and security classification.

3. At the right, part number, month and year fiche was prepared, copyright date(s) of the document, and number of fiche, e.g., 1 of 2, 2 of 2.

1.4 MICROFICHE PRODUCTION

The Hardware Manual, Technical Information, Module/Assembly, and Miscellaneous fiche are produced primarily from hard copy documents which are photographed by a high speed step-and-repeat camera. The Wire Lists and Diagnostic Program Listings are normally produced directly from magnetic tape; no hard copy is required. The tape is run on a computer output microfilm (COM) machine in which the data is processed, displayed on a cathode ray tube (CRT), and photographed by a camera similar to the one used for the hard copy. COM-generated fiche have an INDEX in the lower right frame. This INDEX provides frame numbers and selected information from each frame.

Silver film, produced by the microfiche cameras, is used as the "MASTER" to reproduce the blue diazo film microfiche for the libraries.

1.5 LIBRARY SECURITY

Some microfiche contains proprietary and/or Company Confidential information. These microfiche are labeled 'COMPANY CONFIDENTIAL' or 'DEC Confidential' and are to be used only by DIGITAL employees. They should not be allowed to fall into the hands of unauthorized persons.

- Keep your libraries in a secure place when not in use.
- Return obsolete fiche marked 'COMPANY CONFIDENTIAL' or 'DEC Confidential' to the microfiche librarian for disposal.

Each microfiche library is the property of DIGITAL Equipment Corporation and its security is the responsibility of the individual to whom the library is assigned. When the library is no longer required, it should be submitted to the Cost Center Microfiche Librarian for re-assignment or disposal. *See also 3.5, Transferring of Libraries/Change of Address.*

1.6 HANDLING AND STORAGE OF MICROFICHE

Fiche is rather rugged, but it is not indestructible. At temperatures above 160°F (71°C) the emulsion will soften; in extreme cold the fiche will become brittle. *DO NOT* leave fiche in direct sunlight or in the reader (with the power on) for a long period of time, because the fiche image will fade. X-rays do not affect fiche – they will not be damaged by airport detection systems.

Fiche may be stored in portable readers, library containers, or any acid-free container designed for fiche storage. *DO NOT* carry fiche loose in a tool case; it will become scratched, dirty and oily. Fiche may be washed with water using a soft cloth. *DO NOT* use chemical cleaners on fiche.

1.7 COMMENT CARDS

Two types of Comment Cards, Microfiche Comment (white) and Reader Comment (brown), are provided for your use.

Returned Microfiche Comment Cards are reviewed by Document Control and Micropublishing. Individual responses are made when possible and responses of general interest are published on the Speed Bulletin under 'FICHE NOTES'.

The Reader Comment Cards should be used to comment on the contents and usability of the hardware manuals. These cards replace the Reader Comment sheets contained in hard copy manuals which are reviewed by the Educational Services Development and Publishing site operations manager responsible for that manual.

1.8 MICROFICHE READERS

Generally, large computer sites (DEC 10/20) are equipped with a table-top reader which is shipped with the system. Minicomputer sites are serviced by technicians who carry portable microfiche readers. The portable readers are listed in the Field Service Tools and Test Equipment Catalog and can be acquired through Field Service Logistics. Document Control and Micropublishing *DOES NOT* distribute microfiche readers, but we will help you select the reader that best suits your needs.

Spare Parts for portable readers are available from Stock Room 17 via the Cyco-order mode. The current list is included on the PDP-8, PDP-11 and Minicomputer INDEX fiche under the eye-readable frame heading, 'FICHE NOTES'.

When portability is not required, a desk-type reader is recommended. A dual-lens (24X and 42X) and dual-carrier type reader will satisfy the requirements of most offices. Contact your purchasing group for information on types of readers available and their respective costs.

1.9 READER/PRINTERS

Reader/printers generate paper documents from microfiche. Their cost varies from \$2000 to \$8000. Some Digital sites have this capability. If not, many commercial office supply stores and copy centers can usually handle your fiche-to-hard copy requirements.

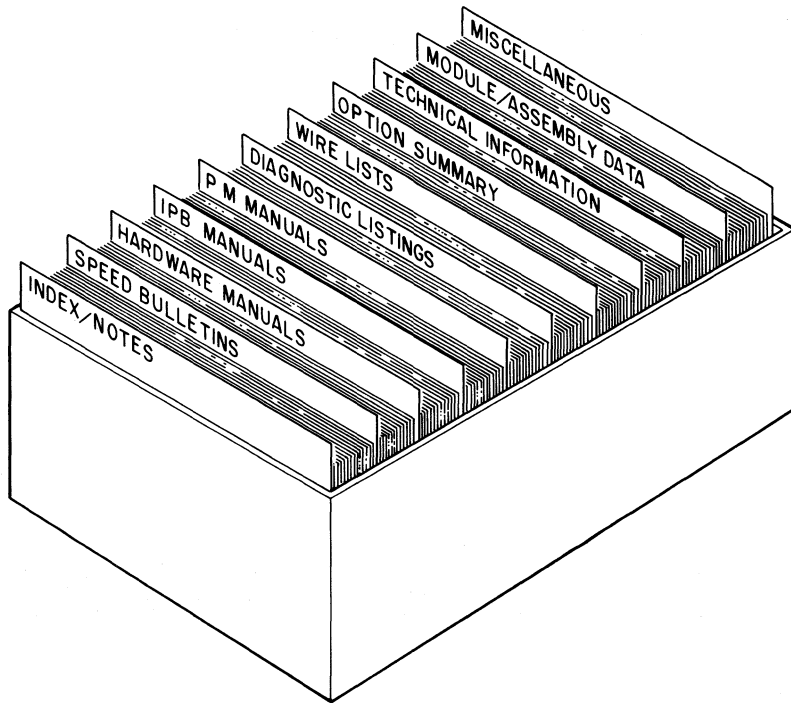
CHAPTER 2

LIBRARY ORGANIZATION

2.1 SECTIONS

The Libraries are separated into major sections and subsections by divider cards (Figure 2-1). Each major section has its own title strip color:

- Red/Black – SPEED BULLETIN
- Brown – INDEX
- Red – HARDWARE MANUALS, IPB's and PM MANUALS
- Orange – DIAGNOSTIC PROGRAM LISTINGS (DPL)
- Yellow – WIRE LISTS (WL)
- White – OPTION SUMMARY
- Green – TECHNICAL INFORMATION - Option Level - (TI)
- Blue – MODULE/ASSEMBLY DATA (MA)
- Purple – MISCELLANEOUS



MA-2386

Figure 2-1 Typical Library

2.2 INTRA-SECTION ORGANIZATION

Within each section of the library, fiche are filed by the device designator or diagnostic Package Identifier (PI) located at the left of the title strip. Diagnostic Listings may, at the user's option, be filed by the MAINDEC/PI number, which is located in the center of the title strip. Filing by MAINDEC/PI number became standard for all new Minicomputer and Large Computer libraries shipped after January, 1979.

Since libraries are provided for use within a cost center, reorganization of the libraries to meet the needs of the cost center is acceptable.

2.3 SPEED BULLETIN

Speed Bulletins have red and black title strips and are marked Company Confidential. They are numbered sequentially and are distributed weekly to Minicomputer, Large Computer, and KS10 library users. VAX libraries are designed for use in conjunction with the PDP-8, PDP-11 or Minicomputer Libraries; therefore, Speed Bulletins are not distributed to VAX Library users since this would be unnecessary duplication.

The intent of the Speed Bulletin is to provide documents to the field as quickly as possible (typically two weeks maximum). Two months or more may be required to complete the publication and distribution process by which a given document reaches its ultimate location in the library. When all documents covered by a particular Speed Bulletin have been published, that Speed Bulletin can be purged.

The Speed Bulletin (Figure 2-2), which is published weekly, contains the newly released FCO's, D-O-L's, FCR's, TECH TIPS, DECO/DEPO's, RPP cover sheets, Option Summary Changes, and Miscellaneous information. These documents will be incorporated into the Technical Information, Option Summary, and Module/Assembly fiche in subsequent updates; the DECO/DEPO's will be included in subsequent COM-generated fiche updates.

A fiche INDEX is located in the left column and is identified by an eye-readable frame. By checking the Fiche Index you can quickly determine the contents of the Speed Bulletin.

A CUMULATIVE INDEX of documents published on previous Speed Bulletins is updated and included on each new Speed Bulletin. This listing of FCO's, D-O-L's, FCR's, TECH TIPS, Option Summary changes, RPP Cover Sheets, and DECO/DEPO's is purged of documents which have been published on the appropriate Technical Information, Module/Assembly, Option Summary or DECO/DEPO microfiche.

Hardware Manuals and other fiche may be distributed with the Speed Bulletin. Instructions for adding these fiche to the libraries are provided under the eye-readable frame, 'UPDATING INSTRUCTIONS', in the left column of the Speed Bulletin.

2.4 INDEX

The INDEX fiche has a brown title strip. This fiche is revised and distributed every two months with new Technical Information, Module/Assembly, and Wire List fiche. The type of library (i.e., MINI, KS10, etc.) and update sequence number is indicated on the title strip as shown in Figures 2-3 and 2-4.

VAX INDEX 80-01

HARDWARE DOCUMENTATION
LIBRARY INDEX UPDATING AND
USER INFORMATION

EP-VAX11-IX-01
COPYRIGHT © 1979
FICHE 1 OF 1


MADE IN USA

Figure 2-3 Index Title Strip (80-01, First Update of FY80)

VAX INDEX 80-02

HARDWARE DOCUMENTATION
LIBRARY INDEX UPDATING AND
USER INFORMATION

EP-VAX11-IX-02
COPYRIGHT © 1979
FICHE 1 OF 1


MADE IN USA

Figure 2-4 Index Title Strip (80-02, Second Update of FY80)

The INDEX fiche contains the following information:

- Fiche notes – Instructions for using the library and procedures for ordering new libraries, changing update quantities, changing address and ordering replacements for missing or damaged fiche.
- Instructions for adding the accompanying fiche to the library. This information is located below the eye-readable frame titled 'UPDATING INSTRUCTIONS'.
- An index for each section of the library. The section index lists all available fiche and information for ordering fiche that are no longer shipped in new libraries. Eye-readable frames are used to identify the index for each section and subsection.

2.5 HARDWARE MANUALS, MICRO CODE AND ROM LISTS, IPB'S, AND PM MANUALS

All Hardware Manuals, Micro Code and ROM Lists, IPB's, and PM Manual fiche have red title strips. The title strip, as shown in Figure 2-5, lists the device at the left, manual title in the center, and fiche part number at the right. Hardware Manuals are filed by the device number.

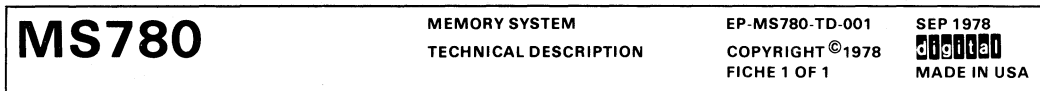


Figure 2-5 Hardware Manual Title Strip

Hardware Manual fiche produced since September, 1977, have part numbers that are similar to the part number on the hard copy version of the manual. For example, the MS780 fiche title strip in Figure 2-5 has a part number EP-MS780-TD-001; the hard copy manual is part number EK-MS780-TD-001.

The IPB's and PM Manuals are each grouped on a series of sequentially numbered fiche. The devices included on the fiche are listed in the center of the title strip as shown in Figures 2-6 and 2-7. Also, eye-readable frames are provided to help the user locate a particular IPB or PM Manual on the fiche.

IPB-01

BA8-C,BA11-F,BA11-K,BA11-L,
BA11-M,BA11-N,BA11-P,
BA11-U,CL8

EP-00001-IP-F
COPYRIGHT©76-78
FICHE 1 OF 1

NOV 1978
digital
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Figure 2-6 IPB Title Strip

PM-PROC-01

BD03,BD04,BD05,BM792-YA,
BM792-YJ,BM873,
CR04-A/B/C/D,CTS11,DA11-B

EP-00001-PM-C
COPYRIGHT©75-78
FICHE 1 OF 1

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digital
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Figure 2-7 PM Title Strip

Hardware Manuals, IPB's and PM fiche are distributed with Speed Bulletins and bimonthly updates.

Some manuals on older products are no longer included in new libraries. These manuals are identified on the INDEX and can be ordered from Document Control and Micropublishing.

Most photographs do not reproduce well on microfiche; therefore, new manuals have few photographs or no photographs at all. Line drawings with larger print are replacing photographs whenever possible to make the new and revised hardware manuals more usable on microfiche. Some of the more important older manuals are being upgraded (photographs replaced by line drawings) and will be republished when the upgrading is complete.

2.6 DIAGNOSTIC PROGRAM LISTINGS (DPL)

ALL DPL'S and DECO/DEPO fiche have orange title strips. The Diagnostic Listing fiche provide the following types of information:

- Abstract
- Equipment Requirements
- Loading and Starting Procedures
- Operating Procedures
- Error Information
- Program Description and Listing

Each COM-produced diagnostic fiche has an index in the lower right frame. Fiche index information is extracted from a selected line of each frame. This may be helpful in locating a test routine or information referenced by the computer program counter (PC) when running a Diagnostic Program.

The library INDEX (brown title strip) list all available DPL's and procedures for ordering fiche that are not part of the standard library configuration. The Minicomputer Library includes a separate index fiche for PDP-9, PDP-12, PDP-14, and PDP-15 diagnostics.

Each computer family has its own DPL's. An index for each family of diagnostics is produced by Diagnostic Engineering and is included with each release. These indexes are called MAINDEC Indexes and the title strip indicates the computer family, revision level, and release number, as shown in Figures 2-8 and 2-9. The release numbers are sequential within a fiscal year and computer family.

11 INDEX

PDP-11 MAINDEC INDEX
CZQAFQO
RELEASE NO. 79-02

AH-9026Q-MC
COPYRIGHT © 76-78
FICHE 1 OF 2

AUG 1978
digital
MADE IN USA

Figure 2-8 PDP11 MAINDEC Index Title Strip
(79-02, Second Update of FY79)

11 INDEX

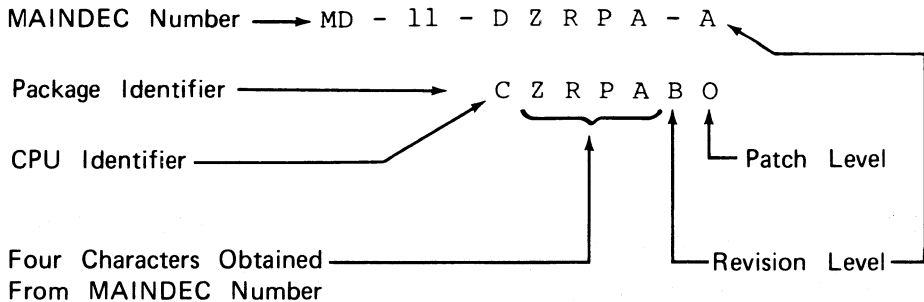
PDP11 MAINDEC INDEX
CZQAFRO
RELEASE # 79-03

AH-90260-MC
COPYRIGHT © 1979
FICHE 1 OF 2

DEC 1978
digital
MADE IN USA

Figure 2-9 PDP11 MAINDEC Index Title Strip
(79-03, Third Update of FY79)

DPL's are identified by DEVICE and MAINDEC Number/Package Identifier. Diagnostics produced or revised after September, 1977, use the new Package Identifier. Figure 2-10 shows the relationship between the MAINDEC Number and Package Identifier. Figures 2-11 and 2-12, the title strips for the CB11 logic test diagnostics, illustrate how the MAINDEC Number and Package Identifier are indicated on the fiche.



- CPU Identifiers:
- A-- PDP-8
 - C-- PDP-11
 - D-- DECSYSTEM 10 & 20
 - E-- VAX (PDP-11/780)
 - J-- PDP-9/15/XVM

Figure 2-10 Relationship between MAINDEC Number and Package Identifier

CB11LOGIC TEST
MD-11-DZCBA-BEP-DZCBA-B-DL-A
COPYRIGHT © 1976
FICHE 1 OF 1OCT 1976
digital
MADE IN USA

Figure 2-11 Title Strip with MAINDEC Number "B" Revision

CB11LOGIC TEST
CZCBAC0AH-8395C-MC
COPYRIGHT © 72-78
FICHE 1 OF 1JUL 1978
digital
MADE IN USA

Figure 2-12 Title Strip with Package Identifier "C" Revision

DPL's in the Minicomputer and Large Computer libraries may be filed by the DEVICE, then the MAINDEC Number/Package Identifier, or by the MAINDEC Number/Package Identifier only. Filing by MAINDEC Number/Package Identifier is the most accurate method because the DEVICE designations are frequently changed when new products are announced. For example, the following DPL's all have the same MAINDEC Number/Package Identifier, but have different DEVICES.

Other filing examples are shown in Section 3.3, UPDATING THE LIBRARY.

All DPL's for the VAX11/780 and KS10-based systems are filed by the Package Identifier at the left of the title strip. Figures 2-13 and 2-14 illustrate the title strips used on the VAX and KS10 diagnostic fiche. DPL's for the VAX and KS10-based systems are identified only by the Package Identifiers, and at the left of the title strip, and are filed by these numbers.

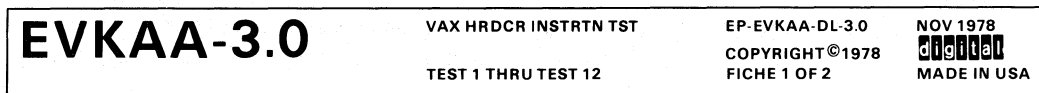


Figure 2-13 VAX Diagnostic Title Strip

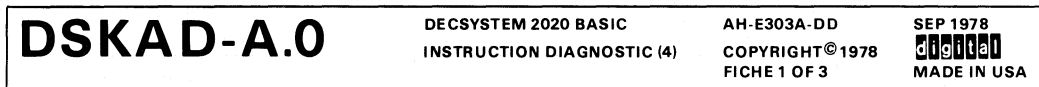


Figure 2-14 KS10-Based System Diagnostic Title Strip

The fiche part numbers with an 'AH' prefix, as shown in Figures 2-12 and 2-14, are assigned by the Software Distribution Center (SDC) and indicate a new or revised diagnostic program. The SDC PDP-8 and PDP-11 Diagnostic Software Components Catalogs (in the MISCELLANEOUS section of the PDP-8, PDP-11 and Minicomputer Libraries) provide the part numbers of the diagnostic media available from the SDC.

Distribution of new DPL's will occur on or before the release of the media by the SDC. Since all revisions of DPL microfiche are normally retained in the library, updating instructions usually do not accompany a DPL microfiche update package.

DECO/DEPO's

A DECO is the document which announces either the initial release or a revised version of a diagnostic program. A DEPO documents specific "patching" which may be field-implemented to correct or enhance a diagnostic program. DECO/DEPO's are produced for the PDP-8, DEC 10/20, PDP-11 and VAX computer families. The DECO/DEPO fiche provides the following information on each diagnostic program:

- Component Part Number and Description
- ECO Purpose
 - patch, change or new diagnostic package identifier and description, patch level, product date, and copy-right date.
- Product Components Affected
 - documents, fiche, and types of media.
- Products Obsoleted

- Problem/Description
- Solution/Correction
- DEPO Patch Area – location, from-to information.
- Product Characteristics – type of processor, operational environment, services affected, etc.

The first and last diagnostic for which there is a DECO or DEPO is indicated in the center of the fiche title strips, as shown in Figure 2-15.

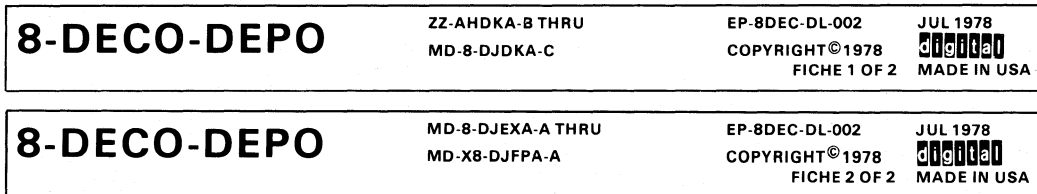


Figure 2-15 DECO/DEPO Title Strips

DECO/DEPO's are first published from hard copy documents on the Speed Bulletin. A consolidated and updated set of COM-generated DECO/DEPO fiche is produced and distributed every two to three months. When an update is received, the previous revision DECO/DEPO fiche should be destroyed.

2.7 WIRE LISTS

All Wire List fiche title strips are yellow. The Wire List revision is specified in parenthesis as a suffix to the Device Designator at the left of the title strips, as shown in Figure 2-16. There are two common types of Wire Lists – Name and Pin Sorts – for the backplanes produced by DIGITAL.

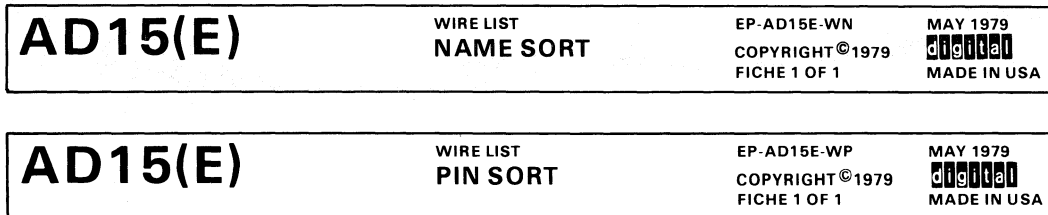


Figure 2-16 Wire List Title Strips

Special application Wire Lists are also included when required. Most Wire List fiche are COM-produced and include an index in the lower right frame. The INDEX indicate which Wire Lists are available for each library type. In some cases the Wire List fiche must be ordered separately. Ordering information is provided under the eye-readable frame, 'WIRE LISTS', on the INDEX fiche.

2.8 OPTION SUMMARY

Option Summary fiche title strips are white. The Option Summary is included in all the libraries except VAX. It replaces the ECO Quick Check's, FCR's, and DOL's on the Technical Information and Module/Assembly fiche (see Figure 2-17).

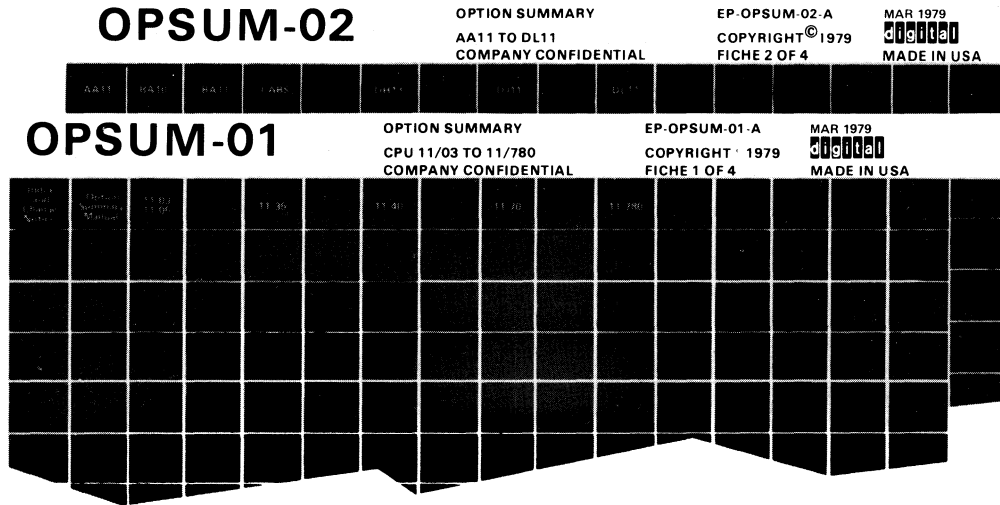


Figure 2-17 Option Summary Fiche Example

Option Summary fiche provide the following information concerning options:

- Option Parts Breakdown
- ECO/FCO/REV History
- DECO/DEPO History
- Documentation and Media Reference
- "Watch Out" flags, i.e., compatibility criteria
- TECH TIP Reference
- ECO/FCO Detail Summary

Additional information regarding the use of this section is located on the OPSUM-01 fiche.

Option Summary fiche are marked 'COMPANY CONFIDENTIAL' and must be destroyed when replaced by an update.

2.9 TECHNICAL INFORMATION (TI)

Technical Information fiche title strips are green and are filed by the device(s) listed on the left of the title strip, as shown in Figure 2-18. When more than six devices are on one fiche, the first and last devices are listed, e.g., DR11 through DT01. Eye readable frames are used to identify each device.

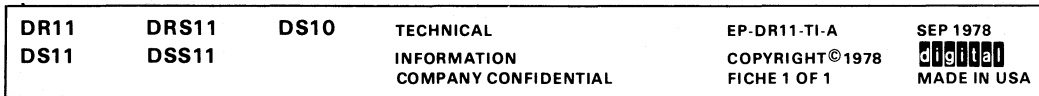


Figure 2-18 Technical Information Title Strip

The Technical Information fiche provide all available documents in the following categories for one or more devices:

- DEC-O-LOG (DOL)
- Field Change Orders (FCO)
- Field Change Order Cross Reference (FCR)
- Tech Tips
- ECO Quick Check

This section also includes a series of fiche titled 'TECH TIP Miscellaneous'. These fiche contain general Tech Tips and are not for a specific hardware option or module. The TECH TIP Administration Document, which explains how to write a TECH TIP and the approval cycle required, is included on the first fiche of this series.

Technical Information fiche marked 'COMPANY CONFIDENTIAL' must be destroyed when replaced by an update.

2.10 MODULE/ASSEMBLY DATA (MA)

Module/Assembly information fiche title strips are blue and are filed by the Module/Assembly designation listed on the left of the header, as shown in Figure 2-19. When more than six devices are on one fiche, the first and last modules are listed, e.g., M8928 thru M8938. Eye readable frames are used to identify each module.


M8928	M8929	M8931	MODULE/ASSEMBLY INFORMATION COMPANY CONFIDENTIAL	EP-M8928-MA-C COPYRIGHT ©1978 FICHE 1 OF 1	DEC 1978  MADE IN USA
M8932	M8933	M8934			

Figure 2-19 Module Assembly Title Strip

Each Module/Assembly fiche provides all available documents in the following categories for one or more modules/assemblies:

- Circuit Schematic Drawings (CS)
- Unit Assembly Drawings (UA)
- DEC-O-LOG (DOL)
- Field Change Orders (FCO)
- Field Change Order Cross Reference (FCR)
- Tech Tips

Module/assembly fiche that are marked 'COMPANY CONFIDENTIAL' must be destroyed when replaced by an update.

2.11 MISCELLANEOUS

Miscellaneous fiche title strips are purple and are filed by the designation at the left of the title strip, as shown in Figure 2-20.

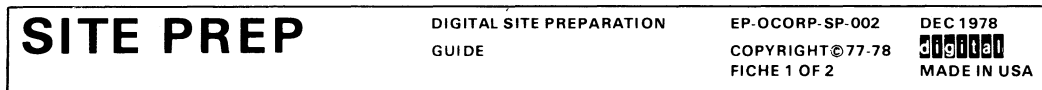


Figure 2-20 Miscellaneous Title Strip

The Miscellaneous section contains information which is of general interest but which cannot be designated for a specific option or device. Examples of these documents are Handbooks, Site Prep Guide, Diagnostic Components Catalogs, and Revision Level Status.

CHAPTER 3

LIBRARY DISTRIBUTION AND UPDATING

3.1 COST CENTER MICROFICHE LIBRARY

The Microfiche Librarian is designated by the cost center's management to coordinate the Microfiche Library distribution with Document Control and Micropublishing. All requests for new libraries, changes in update quantities, or requests for additional or replacement fiche, should be made by the Microfiche Librarian. With the exception of remote locations to which shipments are made directly, all new libraries and updates are shipped to the Microfiche Librarian for distribution within the cost center.

3.2 TYPES OF UPDATES

The information printed on the shipping labels makes it possible for the Microfiche Librarian to monitor and verify requested changes in the distribution data base. Package contents may be confirmed using the "QUANTITY SHIPPED" and "DISTRIBUTION CODE" specified. The significant data fields are indicated in the label example, Figure 3-1.

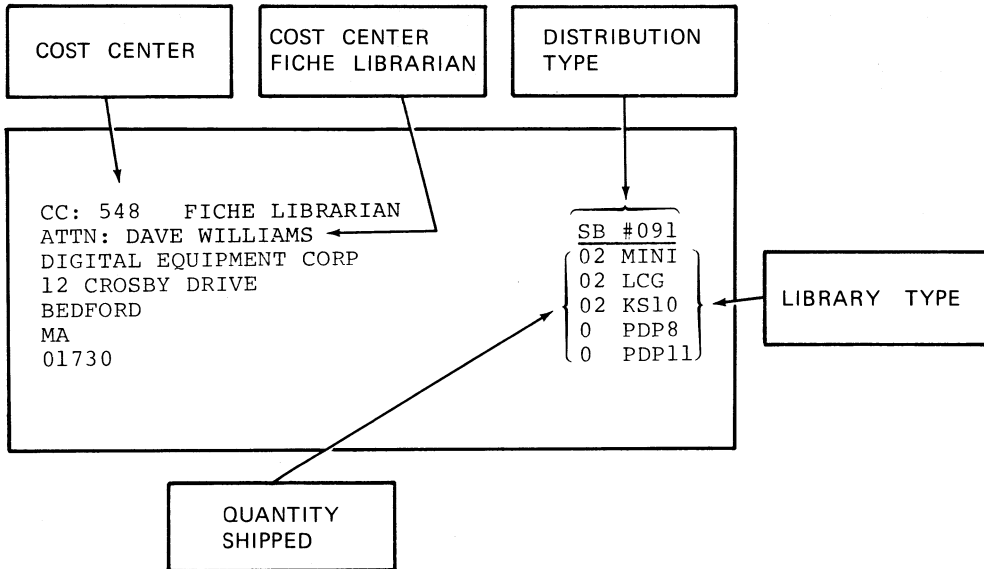


Figure 3-1 Shipping Label Example

Updates are distributed as follows:

1. SPEED BULLETIN and accompanying fiche – Normally published and distributed weekly to the PDP-8, PDP-11, Minicomputer, Large Computer, and KS10-based system libraries. Each SPEED BULLETIN is numbered sequentially and contains identical information for all libraries. The update fiche that accompany SPEED BULLETIN are intended for a specific library type. The SPEED BULLETIN provides library specific instructions under the eye-readable frame, “Updating Instructions”, for incorporating those fiche into the intended library.
2. Diagnostic Program Listing Releases – Distributed on or before the distribution of the media by the Software Distribution Center. Releases normally occur every six to eight weeks for the PDP-8, KL10-based systems, KS10-based systems, PDP-11, and VAX. Each release for a computer family has a MAINDEC INDEX and the release number is indicated in the center of the fiche title strip.
3. Bimonthly Updates – The INDEX fiche and the updates to the Wire List, Technical Information, Module/Assembly, Option Summary, and Miscellaneous sections of the library are distributed every two months. The INDEX fiche has a sequential number and indicates the library type. Instructions for incorporating the new fiche are provided on the INDEX fiche under the eye-readable frame, “Updating Instructions.”

3.3 UPDATING THE LIBRARY

When new microfiche are received, the library should be updated promptly to ensure that it remains current and that the latest information is accessible.

- **SPEED BULLETIN AND BIMONTHLY UPDATES**

1. "Updating Instructions" are provided in the left column of the Speed Bulletin and Index fiche.
2. The "Updating Instructions" list the new fiche, fiche to be removed, and reason for publication of the new fiche. Insert new fiche and remove old fiche from your library as indicated.
3. The new INDEX is intended to replace the previous INDEX fiche. The Speed Bulletin should be retained until it is indicated to be "obsolete" in the Speed Bulletin Cumulative Index.

NOTE

Fiche purged from your library marked COMPANY CONFIDENTIAL or DEC CONFIDENTIAL must be destroyed.

- DIAGNOSTIC PROGRAM LISTINGS (DPL)

No other section of the library is more likely to cause confusion than the Diagnostic Program Listings. The instructions which follow are intended to assist the non-technical person who maintains the libraries. The detailed explanation of the diagnostic numbering schemes can be found in Section 2.6.

BASIC FILING PROCEDURE (OVERSIMPLIFIED)

This (oversimplified) filing procedure is as easy as 1,2,3.

1. Understand the three basic "numbers".
2. Determine which filing scheme has been used for the library being updated.
3. File the fiche just as in any alphanumeric scheme. (Refer to the INDEX fiche, read the listing under the eye-readable frame "Diagnostic" if there is uncertainty about sequence.)
 - a. The basic "numbers" are as follows: (Note that exceptions exist, but will not be considered in this explanation.)

The "DEVICE" number on diagnostic fiche is one or more DEC option or module designation(s), such as DH11, TM02, etc.

The "MAINDEC" number is a group of four alphabetical characters, such as FKTH, VDLA, etc.

The "MAINDEC" number is always followed by a one or two character "REVISION" number, such as A, B, C, C0, E1, etc.

b. Every library is organized in one of two possible ways, either by "DEVICE" or by "MAINDEC" number.

– DEVICE sort. File first by "DEVICE", then by "MAINDEC" number, then by "REVISION". The Minicomputer and Large Computer libraries have been configured from the beginning using this scheme. Since this filing scheme is no longer recommended, no specified filing instructions are included here; when the "MAINDEC" number filing scheme is understood, the "DEVICE" scheme will cause no difficulty.

– MAINDEC sort. File first by "MAINDEC" number, then by "REVISION" (with "DEVICE" not considered). (NOTE: This is the recommended filing sequence which has become the standard for new libraries produced since January, 1979.)

- c. The filing procedure, when using the "MAINDEC" number sort, is apparent in the INDEX excerpt of Figure 3-2.

	DEVICE NUMBER		MAINDEC NUMBER	
LIBRARY type-11's and C's indicate that these are PDP-11 diagnostics.	KD11-E	MD 11	D	FKTH AO †
	PDP-11/34	C		FKTH BO* ††
	DLV11-J	C		VDLA AO
				VDLA BO*
"DEVICE" number-- Note that these are NOT in file order.	DRV11-B	MD 11	D	VDRA AO*
	DRV11-B	MD 11	D	VDRB AO
	DRV11-B	C		VDRB BO*
	DLV11-E	MD 11	D	VDVA AO
		C		VDVA BO*
	DLC11-F	MD 11	D	VDVC AO
		C	VDVC BO	
	DLV11-F	C		VDVC CO*

* Asterisks indicate latest (or only) rev. level of each MAINDEC. Libraries shipped prior to Jan. 1979 contain all rev. levels of each MAINDEC; libraries shipped since Jan. 1979 contain latest (or only) revision MAINDEC.

† This number is shown in the center of the fiche title strip as MD-11-DFKTH-A.

†† This number is shown in the center of the fiche title strip as CFKTHBO.

Figure 3-2 Simplified Diagnostic Filing Scheme

The INDEX has been "formatted" to emphasize the compatibility which exists between the two numbering systems, an old and a new system, and to make filing as simple as possible.

NOTE

In the LCG library there is a group of PDP-11 diagnostics which are indexed and filed at the end of the diagnostics section of the library.

3.4 ORDERING REPLACEMENT FICHE

If a complete update was missed, or a single fiche is missing, check with the Cost Center Microfiche Librarian to determine if it is available at your location. If not available, the Microfiche Librarian should send the request on an order form or memo to Document Control and Micropublishing.

- | | |
|-----------------------|---|
| For updates | – List the library type, update number, and quantity required. |
| For individual fiche | – List the device, fiche part number (EP- or AH-), fiche number (1 of 5, 3 of 5, etc.) and quantity required for each fiche. The library INDEX fiche lists all fiche available. |
| Shipping Instructions | – Should include cost center, location, and microfiche librarian's name. |

3.5 TRANSFERRING OF LIBRARIES/CHANGE OF ADDRESS

Libraries are assigned to cost centers. The Cost Center Microfiche Librarian must inform Document Control and Micropublishing about library transfers and address changes to ensure uninterrupted service.

APPENDIX A

POLICIES AND PROCEDURES UNIQUE TO EACH LIBRARY

- **PDP-8, PDP-11 AND MINICOMPUTER LIBRARIES**

- A brown striped fiche titled PDP-9,12,14,15 DIAG INDEX provides a list of available diagnostic fiche for the PDP-9, PDP-12, PDP-14, and PDP-15 computer families. This fiche should be filed with the INDEX fiche.
- Only the latest revision of the PDP-8 and PDP-11 DPL's are included in new libraries. Previous revisions may be ordered from Document Control and Micropublishing.
- Wire Lists (Name Sorts); PDP-9, -12, -14, and -15 Diagnostics and PDP-9/15 Hardware Manuals are not shipped in the basic library. These fiche may be ordered from Document Control and Micropublishing.
- A limited number of Wire List (WL) Name Sort updates are distributed to Field Service cost center fiche librarians:

1 to 5 libraries – 1 set of WL updates

6 or more libraries – 3 sets of WL updates

Additional WL updates may be ordered from Document Control and Micropublishing.

- Additional microfiche boxes are not supplied by Document Control and Micropublishing. Most commercial office supply stores stock microfiche containers; therefore, you should attempt to purchase them locally. Maynard Purchasing will also handle your requests.

- **VAX LIBRARY**

- New libraries only contain the latest diagnostic revisions.
- Does not contain cross product line information. This library is intended for use with the PDP-11 or Minicomputer Library.
- Selected LSI-11 Diagnostics are part of this library.

- **LARGE COMPUTER LIBRARY (CMF AND DMF)**

- KA Hardware Manuals and Diagnostic Program Listings are not shipped in the basic library. They must be ordered from Document Control and Micropublishing.
- Large Computer libraries are shipped in a locking metal box so they can be left on-site.

- **KS10 BASED SYSTEM LIBRARY**

- This library does not include the complete sequence of IPB and PM fiche. Only the IPB and PM fiche which document options that are used on the KS10-based system are included in this library.

APPENDIX B

OTHER MICROFICHE PUBLISHED BY

DOCUMENT CONTROL AND MICROPUBLISHING

NEW PRODUCT INFORMATION (Branch Starter Kit)

The New Product fiche have gray title strips. They are distributed monthly and are not normally updated. The New Product fiche contain Maintenance Plans, Recommended Spares Lists, User Manuals, Print Sets (24X reduction), and any other information provided by Product Support.

The 'COMPANY CONFIDENTIAL' New Product Information (NPI) fiche are available to Field Service Managers and Supervisors. Ordering information may be obtained from Document Control and Micropublishing.

OEM MICROFICHE

The OEM Product Lines are shipping a product-specific microfiche package of Hardware Manuals, Diagnostic Listings and Wire Lists with each 11/70, 11/60, 11/34, 11/03, 11/04, PDP-8 and KS10-based system. OEM fiche are current when shipped and will not be updated. All OEM fiche have white title strips.

MAINTENANCE DOCUMENTATION SERVICE (MDS)

The MDS microfiche libraries are available to DIGITAL customers through the Accessories and Supplies Group, Nashua, N.H. MDS libraries are family or device oriented and contain many of the same fiche as the libraries used by DIGITAL employees. The main differences are in the Technical Information and Module/Assembly fiche which do not contain COMPANY CONFIDENTIAL documentation such as TECH TIPS, FCR's, and ECO Quick Checks. These MDS fiche are identified by an 'ES' part number instead of the 'EP' number.

MDS libraries are updated monthly and the customer receives a monthly bulletin of FCO's, DOL's, and DECO/DEPO's similar to the Speed Bulletin.

